DOCUMENT RESUME

ED 203 713 FL 012 401

AUTHOR Lambert, Richard D.: Tucker, G. Richard
TITLE The Role of NIE in Stimulating Innovative Language Learning and Teaching.
SPONS AGENCY National Inst. of Education (ED), Washington, D.C. National Council on Education Research.
PUB DATE 29 Apr 81
CONTRACT NIE-P-81-0057
NOTE 20p.: Paper presented at a meeting of the National Council on Education Research (Washington, DC, April 29, 1981).

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Agency Role: *Bilingualism: Educational Policy: Elementary Secondary Education: *Instructional Innovation: Language Research: Language Skills: Material Development: Postsecondary Education: Research Needs: *Second Language Instruction: *Second Language Learning: Testing: *Uncommonly Taught Languages

ABSTRACT

This paper is one of ten that were commissioned to investigate research needs and to stimulate planning activities. Two underlying assumptions of this paper are that all Americans should have the opportunity to develop an ability to speak, read and write English well, and that all Americans should be encouraged to maintain or acquire a second language. Recent research has revealed the enriching effects that bilingualism can bring to an individual and a society. The International Education Division of ED has supported research and materials development efforts for certain of the less commonly taught languages. It is argued that a great deal more work needs to be done on less commonly taught languages, effective second language learning and teaching, the retention or reinforcement of language skills once acquired, and language loss. Eight major foci for research and materials development are identified. Of those, three are considered to be of immediate concern and of high priority for NIE: (1) a continuing examination of factors associated with second language learning in diverse pedagogical or social settings: (2) the development of a new set of testing devices: and (3) an examination of language skill attrition involving basic psycholinguistic research directly concerned with language skill loss. (Author/AMH)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED203713

THE ROLE OF NIE IN STIMULATING INNOVATIVE LANGUAGE LEARNING AND TEACHING

Richard D. Lambert
University of Pennsylvania

&

G. Richard Tucker
Center for Applied Linguistics

In few aspects of our educational system are we so in need of a fundamental review and reorientation as in the domain of language teaching. What our educational delivery system is providing at all levels is clearly inadequate to our national needs -- indeed, in many aspects seems hardly focused on that national need at all, and this in spite of the fact that a very large portion of students' and faculty's time is committed to developing language skills. Here, in brief form, is an agenda for needed changes in existing practices and philosophy growing out of our new national needs.

We start with the notion that more, not fewer, Americans need to develop a genuine competency in English and at least one other language. We argue this on three basic grounds:

1. The enhancement of the individual's cognitive development -- contrary to the evidence of earlier studies (reviewed in Macnamara, 1966), recent carefully controlled research in the United States, Canada, Israel, Singapore, and South Africa has shown that, aside from the language competency itself, bilingualism has important positive cognitive benefits for the individual in terms of creativity, cognitive flexibility, social tolerance as well as expanding his or her occupational options (see, for example, Barik & Swain, 1976; Ben-Zeev, 1977; Cziko, Lambert & Gutter, 1979; Hornby, 1977; Ianco-Worrall, 1972; Peal & Lambert, 1962). Many of the earlier studies were plagued with serious methodological weaknesses. For example,

FL012401

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

with respect to the relationship between bilingualism and cognitive development early researchers failed to assess accurately the level of monolinguality or bilinguality of their subjects; they failed to control the socioeconomic status of participants, etc. In the studies conducted recently, more care has been taken to guard against these pitfalls and the results indicate that school-age subjects who possess approximately equivalent facility in two languages are significantly more creative and cognitively flexible than their carefully selected monolingual counterparts. A majority of these studies have been correlational. This factor has raised the question of whether brighter, creative children become bilingual more easily than monolingual children or whether bilinguality leads to an enhancement of creativity. There are at least two studies which suggest that children who are led to become bilingual by their school experience develop a more diversified set of cognitive skills and problem-solving strategies over the course of their elementary schooling than do a set of monolingually educated youngsters who are carefully matched in terms of nonverbal IQ, socioeconomic status and parental attitudes and aspirations at the beginning of their formal schooling (Barik & Swain, 1976; Lambert, Tucker & d'Anglejan, 1973). Additional research is, of course, needed; but the results of these studies certainly strongly suggest that bilingualism yields cognitive benefits and that an educational program designed to promote bilinguality should be viewed as an enriched educational option rather than as a form of compensatory education.

2. After a period of decline in the number of Americans whose mother tongue is a language other than English, we now have very substantial new immigrant groups with a non-English mother tongue -- in Los Angeles, for instance, those whose mother tongue is other than English will soon comprise more than 50% of the school population (Waggoner, 1976; Tucker & Gray, 1980). This fact has already put heavy stress on the primary and secondary educational systems in many areas of the United States. The recent controversy surrounding the discussion of proposed "Rules for Nondiscrimination under Programs Receiving Federal Financial Assistance through the Education Department" and their subsequent withdrawal illustrates the magnitude of pressures faced by various local and state educational agencies. In this regard, the actions taken to implement the rulings of Doe v. Plyler (1980) and U.S. v. Texas (1981) will assume monumental importance. The former mandated free education for all Texas youngsters eligible by age -- even those whose parents are undocumented aliens; the latter mandated that bilingual education be provided for all limited English speaking Mexican-American youngsters from kindergarten through grade 12 in schools under the jurisdiction of the Texas Education Agency.

Moreover, there is considerable evidence that the foreign students coming into our tertiary educational sector will bring with them more and more limited English language skills, putting each college or university under immense pressure to mount an effective program for the teaching of English as a second language (TESL).

3. As our nation becomes increasingly dependent upon foreign trade, and as international economic and political events exert more and more influence upon our own social well being, a largely monolingual population will be a greater and greater handicap to our national purpose in the decades to come. Earlier researchers had argued that linguistic diversity was associated with economic stagnation or decay, but Lieberson and Hansen (1974) argue to the contrary that societal bilinguality rather than monolinguality is associated with economic growth and development

In developing a fresh policy with respect to the role of language(s) for literacy training and for basic education, we must first distinguish four types of students that bring different needs and resources to the classroom: students who are of non- or limited English proficiency; students who are already at the time of school entrance "balanced bilinguals"; those who are English dominant but who come from some other ethnic background (e.g. Spanish ethnic origin but English mother tongue); and monolingual English speaking students. Each of these groups brings different needs and resources to the classroom, each of them calls for a different strategy tailored to their particular situation, but for each the goal should be similar.

First, all youngsers in American schools should have the opportunity to develop an ability to speak, read and write English well so that they can profit from instruction in that language and participate fully in all aspects of American society. Second, all Americans should be encouraged to maintain or acquire a second language. For the non-English speakers and for those who are already bilingual this means facilities for upgrading

if necessary and for reinforcing the other language; and for monolingual English speakers, a more effective instructional system for acquiring a second language.

We recognize that these objectives are not new; indeed in one form or another they have been proposed and debated for some time, and a great deal of important research and experimentation on these topics has already taken place. In the United States, a good deal of the recent research surrounding this topic has been supported by NIE (see National Clearinghouse for Bilingual Education, 1980). In fact, NIE supported the establishment, in 1979, of a National Center for Research on Bilingualism at the Southwest Regional Educational Laboratory, but we are still awaiting results from that cooperative research agenda.

In addition to the research cited above, we would argue, however, that it is time for a fresh overview looking for points of leverage, new directions or lacunae in our current language teaching practices which need immediate attention. In general, we would argue that our current national objectives have a curious contradiction in that we promote the decline of non-English language competence in immigrant populations at the same time that we encourage the development of such competencies among English speakers; we need a shift in research focus toward the promotion of genuine bilingualism on both sides. In addition, our current system uses the wrong teaching strategies, measures competency in the wrong way, is too exclusively focused on the lower levels of competency, presents too few and the wrong languages, and has paid little or no attention to the retention or reinforcement of language competencies at the adult level. Thus, we believe that there is a need to support further research whose

primary goal is to improve basic educational practice. We feel that in this period of general federal budgetary retrenchment which will surely affect all agencies, issues related to the choice and sequencing of languages for literacy training and for basic instruction needs to be accorded extremely high priority. We have presented below a set of eight research foci which we believe deserve this attention.

1. Promotion of Bilinguality

It is essential that direct attention be given to the promotion of balanced bilingualism with full competence in both languages, without any language-production deficiency that inhibits communication. Research should focus on the cognitive, affective and social factors which assist or delimit full accomplishment and retention in two languages at once (see, for example, Gardner & Lambert, 1972; Naiman, Frohlich & Stern, 1975; Tucker, Hamayan & Genesee, 1976). This research should be aimed at unravelling and describing the constellation of factors associated with successful second language mastery and, in particular, at the patterns of interaction between such factors and diverse formal pedagogical approaches. Is the cluster of traits associated with success similar across educational options or does there exist an optimal type of program by type of child interaction?

Within this general research rubric, we believe that attention should also be given to the social or educational consequences that may befall a child who presents himself via some form of socially stigmatized or marked speech. We raise for investigation questions such as whether a Mexican-American or Vietnamese child speaking Spanish or Vietnamese-accented English would be stigmatized or reacted to in the same fashion as a child speaking Black nonstandard English. Is the range of tolerance

for those perceived to be less than fully fluent or standard non-native speakers of English similar to or different from that for native speakers (see, for example, Tucker & Sarofim, 1979)?

In addition, special attention should be paid to the reasons why it seems especially difficult for English speakers to achieve native like facility in another language. Are the reasons essentially social or attitudinal in nature? There seems no reason to believe that English-speaking youngsters would not easily and rapidly become bilingual if a high priority were placed on innovative second language teaching within the typical school curriculum. We do know, however, that such teaching must be meaningful for the child, reasonably intensive and carried out by trained teachers (cf., Burstall, Jamieson, Cohen & Hargreaves, 1974; Stern, Swain et al, 1979).

In terms of basic research, we would call special attention to the need for careful studies on the motivational aspects of language acquisition. There is a substantial and accumulating body of recent literature calling attention to the importance of motivation and the identification of broad attitudinal/motivational areas (for a recent digest see R. C. Gardner, 1980), stressing their importance in the attainment of functional bilingualism. However, a much more focused set of studies needs to be undertaken identifying more precisely the motivational elements relevant to language acquisition both in classroom situations (perhaps differentiated by stage of learning--the well-known second year slump--and style of instruction) and throughout life. Such studies need to be specific enough to assist the teacher or the individual in enhancing motivation under a variety of conditions, removing attitudinal

obstacles where they occur, or abandoning attempts to induce language learning when motivation is almost totally absent and cannot be created. Alas, the latter is the situation in much of classroom instruction today. Some really hard-headed, individual-specific research on this question would be helpful.

2. Criteria for Assessing Language Proficiency

A shift should be made from a semesters-passed to a proficiency criterion for measuring the effectiveness of language instruction. Much of the unreality of high school and college language instruction is that it is made to fit into the procrustean bed of course units both as teaching segments and as measures of accomplishment. This indirect, proxy system of specification of goals and accomplishments must be translated into direct measures of student -- and for that matter teacher -- proficiency. Some of this is already underway through the efforts of the National Assessment of Educational Progress (NAEP) and should be encouraged.

Moreover, we need a whole new set of testing strategies. Our current multiple-choice, paper and pencil, national standard testing systems are fine for their limited purpose, but they are of really little help to teachers or students. New measurement devices geared to diagnostics and remedial strategies, and to a measurement of a wider range of skills than lexical and morphological knowledge would be helpful. The philosophy and style of testing cast a long shadow over classroom teaching. It would appear to be the case that a great deal of additional basic language testing development needs to be encouraged. The disciplines and research interests of psycholinguists and psychometricians have diverged markedly from the early 1960's when, for example, the monograph by Lado (1961) on Language Testing described an approach, a philosophy and a set of assessment

goals that was quite compatible with the views of language acquisition researchers. Psychometricians have continued to hone and to develop their analytic tools and skills; but in a curious way they have not seemed responsive to the bifurcation of interest by language researchers which have dictated that we describe and understand the acquisition of language function as well as of language form (cf., Tucker & Cahir, 1980). Clearly additional work in test development is needed.

3. Emphasis for Classroom Instruction

The goals and the technology of classroom instruction should be shifted from the current emphasis on structurally-graded to notionally-functionally-based syllabi. The primary focus of activity in the classroom should be on communicative competence -- not just on simulated dialogue -- but on genuine communication, even in some cases at the possible expense of grammatical correctness. Indeed, if communication among the four classes of students we listed at the outset could be enhanced, even used as a classroom resource, so much the better (Tucker & d'Anglejan, 1975). Research on language pedagogy is, of course, a substantial field with its own set of scholars and publications. Rather than adding to the main currents of the field, NIE should adopt a catalytic role encouraging research at the margin which will help transform the goals of language pedagogy in the above direction. In addition, a special effort should be made to encourage research which is very specific in its focus, that is not just research on general principles or general pedagogical styles, but rather careful studies aimed at maximizing the effectiveness of teaching specific features of language performance to particular kinds of students in particular situations. Emphasis should be placed upon the utilizability of the findings for actual learning situations.

4. Functional Language Usage

The conception of the domain of language acquisition in our educational institutions tends to be much too narrowly defined. So long as only the language departments are concerned with the students' learning and, more importantly, the use of language skills, we will make very little progress in combatting the decline in language enrollments. For motivational purposes and to provide supplemental learning time, it is essential that language instruction be integrated with other parts of the curriculum. Students who see that no one else is using foreign language materials are hardly motivated to use them themselves. To a considerable extent, the changes needed to induce this breaking out of the language department ghetto are institutional and probably beyond the mission of NIE. For instance, it would be interesting to note whether language enrollments have declined any faster than the language competencies of the faculties; surely some investment in raising the skills of the faculty is a prior requirement to the introduction of foreign language materials in substantive courses. This is, of course, beyond NIE's immediate mandate, but research on what does and does not work would be helpful. A special effort directed at the introduction of foreign language materials and sources into basic text books, particularly in the social sciences, would be helpful, serving both NIE's research and dissemination roles.

5. Level of Skill Development

One reason why school-learned language competencies are so little used, including their use in non-language courses, is that the level of skill acquired by the student is well below the point where he

or she might make genuine use of the language either in learning something else or in a real life situation. Our instructional system is a mile broad and an inch deep. We spend most of our effort in getting as many students as possible to take a year or two of French or Spanish, but the slope of the enrollment pyramid, that is the proportion of students in increasingly higher grades, is very steep: everybody is at the bottom of the pyramid.

We need to develop materials and teaching strategies focused on the higher levels of language skills. Most of the available texts and tests are focused on a very low level of skill; after the first two years literature tends to take over. How do we get people from a basic skill up to a level of competence, particularly in speaking and comprehension, where the language is genuinely useable? Clearly, not everyone need be taken to the highest level of skill, but the materials and teaching technologies ought to be there for those who should or want to develop such skills.

We need a major flowering of pedagogically-oriented research focusing on the acquisition of higher levels of language skills, particularly oral-aural skills. This is now done mainly in an ad hoc fashion with very few carefully worked out materials. For instance, even the work count strategies sometimes used to design text books are aimed at teaching students those vocabulary items that get the greatest use. Those with the lowest frequencies are consigned to the never-arriving future lessons in the the non-existent next textbook. Surely research is needed on how we get more students beyond that plateau of post-beginner, middle level competency on which so many get marooned. Given our institutional structure and the consequent nature

of the market, text book publishers are not going to venture into this area. The necessary research has to be deliberately fostered.

6. Necessity to Teach Other Languages

As our commercial and political world expands in the coming decades, the traditional obsession of our language teaching with Iberian Spanish, Parisian French, and German becomes less and less defensible. We must expand our language teaching capacity even at the primary and secondary school level to include Chinese, Japanese, Russian, Latin American Spanish, Portugese, and even some of the scarcer languages. The justification of teaching languages to give the student some exposure to "high culture," the cultural heritage of our civilization, is no longer persuasive. Surely, many of the nations with whom the American citizen will have to deal in the next century are not going to be in Western Europe. Indeed the resources devoted to the teaching of such an important world language as Chinese is woefully inadequate (see Eddy, Wrenn & Behrens, 1980). Likewise, American interest in or contribution to the teaching of other so-called exotic or uncommonly taught languages needs to be upgraded enormously (see for example, Petrov, 1980).

In 1978, 99.46% of our high school modern language enrollments were in European languages; out of 3,625,304 enrollees only 19,050 students were enrolled in non-Eurpoean languages, and 3,508 of those were in Hebrew. And among European languages, 55.9% were in Spanish, 30.4% in French and 10.7% were in German. Two decades after Sputnik, there were still only 10,883 students enrolled in Russian classes at level in high school.

To make a dent on the existing linguistic parochialism of our language teaching establishment is a massive, long term effort, but it

must be begun. This peculiar parochialism is extended to the basic research that has been, or is being, conducted on language acquisition. Very, very little of that research takes as its domain any language other than a Western European one. Studies of acquisition and for that matter, even testing in the less commonly taught languages are very rare indeed.

Surely a special effort needs to be made to encourage research on problems and effective strategies for language acquisition in the less commonly taught languages. In this, we have a great deal to learn from other countries of the world. Our current dispersed, underfunded, piecemeal effort has made surprising progress, but an effort that amounted to even one hundredth of what is devoted to French and Spanish would produce spectacular results. And surely NIE can play a constructive role in the dissimination of the materials that are now available. Indeed, a highly innovative role for NIE, one that will serve a major national need, is to help devise a language delivery system whereby a substantial number of languages in demand by small clusters of students who are widely dispersed geographically can be taught by faculty concentrated in the few language and area centers where scarce language teaching skills are now available. We cannot staff every school district to teach, say Japanese or Hindi or Arabic, but such instruction should be much more widely available. The individualized instructional networks that currently exist have a very limited coverage in languages and level of language taught, and the technology is just in its infancy.

7. Language Attrition

High priority attention needs to be paid to the attrition of language skills, once acquired (Lamber, 1980; Lambert & Freed, in press).

Almost nothing is known about this subject, yet from the perspective of public policy it is at least as important as what is learned in the first place. It seems foolish to constantly put more and more language skill training in at the top of the barrel. If language training in school is essential for later life, how much of it survives until later life, or for that matter, two years after it is given? If our ethnic heritage is one of our major national resources and should be maintained, how much of the ethnic language heritage is dissipating in first and second generation immigrants? If American business or government needs people who must retain a high level of language competence, what kinds and how freqent should reinforcement be given? If one were to reexamine and redesign existing teaching materials and strategies to maximize retention as well as to make initial acquisition more efficient, how different would those materials and strategies be? If one were to develop measuring devices focused on diagnosis and prescription of learning strategies for second time rather than first time learners, what would they be?

Research on language attrition is still pre-natal. Almost no basic research has been conducted directly on the topic, particularly as regards classroom learned second languages, hence we include a somewhat more extensive and specific discussion of a research agenda. A schematic summary of the scattered relevant studies is appended.

There are a number of existing fields of linguistics that shed light tangentially on the problem and suggest starting hypotheses. In the main, they lie in the areas of psycholinguistic research, particulary that with aphsaia, senility and other cerebral deficits in studies of the sequencing of "features" during language acquisition in both

first and second languages; and in socio-linguistic studies focusing on language contact, fossilization, pidginization, creolization, or the decline and death of whole languages. (relevant aspects of each of these field are summarized by experts in each field and hypotheses for further research are presented in Lamber and Freed, in press).

Basic research needs to proceed along a number of lines simultaneously. First, psycholinguistic research needs to be generated which is directly concerned with language skill loss. Second, analysis must be made of existing bodies of data on individuals who are likely to have experience genuine skill loss: e.g., students after the lapse of a number of years since their instruction stopped; professionals, particularly government employees and businessmen, who gain a language skill, then have it fall into disuse; immigrant groups with varying degrees of isolation and home use of first languages. Third, a series of case studies, largely ethnographic in character, need to be carried out to give us some detailed, individual insights into the specific aspects of linguistic content and performance that need to be measured. The studies of the decline in East Sutherland Gaelic by Nancy Dorian are excellent models to follow. Fourth, a fresh series of measuring devices need to be created which are: (1) diagnostic and discrete point in character rather than global tests aimed at arriving at a single scale score; and (2) are functional and performance oriented rather than just measures of the ability to recognize or reproduce grammatical and lexical features. The designation of the items to be measured and the designation of appropriate units of measurement call for fresh theoretical and conceptual development. In particular, questions of the sequencing

of items, their clustering, their robustness in the face of disuse, and the ease with which they can be restored are central to the research. Fifth, a set of agreed upon predictor variables need to be developed, that is, a common set of relevant demographic, experiential, attitudinal, and motivational variables to be asked of each individual in each study must be developed so that the scattered bits of research can be made cumulative. Sixth, a major fresh survey needs to be designed and carried out on a cohort of subjects to be followed over time so that individual and situational variability can be explored. And finally, an examination of the effects of various cognitive styles, learning situations, and teaching materials on the rate and content of language attrition needs to be carried out, hopefully leading to the design of fresh matierals and teaching strategies to restore as quickly and as fully as possible lost language skills.

Each of these research domains calls for a major effort. Together they represent almost a new sub-division of linguistics and language pedagogy. It is time the task was begun.

8. Language Teaching for Adults

Finally, special attention must be given to language teaching facilities for adults. It is among adults, and we refer here not only to teachers, faculty members and other professionals who must deal with language materials, but to the citizenry in general, that the real need to use a foreign language is likely to arise. Working adults often cannot, or will not, go back into the high school or college classroom to relearn or begin a new language. The setting and materials are not geared to their need, but unlike most students, many of them do have the

motivation to learn. Private organizations have met this need in part, but their prices are often exhorbitant and they may not provide the type of training really needed. A much more general assault on the problem seems to be in order. And within this area, finding out what adults remember of a language skill they once had and making available learning materials that have been designed to build on what they know rather than starting back a point zero are necessary first steps that must be taken. There is currently nothing available to accomplish this.

Conclusion

This is a rather full agenda. Some of it lies outside of the domain that NIE has traditionally defined for itself, but all of it is essential for a genuine national language teaching strategy. In particular, NIE has previously played little role in basic research for the needs of higher education, advanced skill teaching, or the less commonly taught languages. As as result, with FIPSE by and large defining itself out of basic research, with NSF ruling out research that is at all pragmatic in its outcome, with NEH distinguishing between language and literature and including only the latter in its mandate, and the the Education Department's research program for scarce languages having a very limited budget and emphasizing the language needs of advanced specialists, much of what is desperately needed for a language policy to fully meet national needs is not being met. Perhaps NIE can take the lead in establishing an interagency task force to coordinate effort at all levels.

References

Barik, H.C. & Swain, M. A longitudinal study of bilingual and cognitive development. International Journal of Psychology. 1976, 11, 251-263.

Ben-Zeev, S. The effect of bilingualism in children from Spanish-English low economic neighborhoods on cognitive development and cognitive strategy. Working Papers on Bilingualism, 1977, 14, 83-122.

Burstall, C., Jamieson, M., Cohen, S. & Hargreaves, M. Primary French in the Balance. Windson, England: NFER Publishing Company, Ltd., 1974.

Cziko, G. A., Lambert, W.E. & Gutter, R. French immersion programs and students' social attitudes: a multidimensional investigation. Working Papers on Bilingualism, 1979, 19, 13-28.

Eddy, P.A., Wrenn, J.J. & Behrens, S.A. Chinese Language Study in American Higher Education: State of the Art. Language in Education. Washington: Center for Applied Linguistics, 1980, 30.

Gardner, R.C. & Lambert, W.E. Attitudes and Motivation in Second Language Learning. Rowley, Mass.: Newbury House, 1972.

Hornby, P. (Ed.) Bilingualism: Psychological, social and educational implications. New York: Academic Press, 1977.

Ianco-Worrall, A.D. Bilingualism and cognitive development. Child Development, 1972, 43, 1390-1400.

Lado, R. Language Testing. London: Longmans, 1961

Lambert, R.D. Language Skill Attrition. Linguistic Reporter, 1980, 23, 1, 1-3.

Lambert, W.E., Tucker, G.R. & d'Anglejan, A. Cognitive and attitudinal consequences of bilingual schooling: the St. Lambert project through grade five. Journal of Educational Psychology, 1973, 65, 141-159.

Lieberson, S. & Hansen, L.K. National development, mother tongue diversity and the comparative study of nations. American Sociological Review, 1974, 39, 523-541.

Macnamara, J. Bilingualism and Primary Education. Chicago: Aldine, 1966.

Naiman, N., Frohlich, M. & Stern H.H. The good language learner. Toronto: Modern Language Centre Ontario Institute for Studies in Education, 1975.

National Clearinghouse for Bilingual Education. Resources in Bilingual Education: Guide to Current Research. Rosslyn, VA: InterAmerica Research Associates, 1980.

Peal, E. & Lambert, W.E. The relationship of bilingualism to intelligence. Psychological Monographs, 1962, 76, Whole No. 546.

Petrov, J.A. (compiler). List No. 9 Foreign language, area, and other international studies: A bilbliography of research and instructional materials. Washington: Government Printing Office, 1980.

Stern, H.H., Swain, M. et al. Three approaches to teaching French. Toronto: Ontario Institute for Studies in Education, 1976.

Tucker, G.R. & d'Anglejan, A. New directions in second language teaching. In R.C. Troike & N. Modiano (Eds.) Proceedings of the First Inter-American Conference on Bilingual Education. Arlington, VA: Center for Applied Linguistics, 1975. Pp. 63-72.

Tucker, G.R., Hamayan, E. & Genesee, F. Affective, cognitive and social factors in second language acquisition. Canadian Modern Language Review, 1976, 32, 214-226.

Tucker, G.R. & Sarofim, M. Investigating linguistic acceptability with Egyptian EFL students. TESOL Quarterly, 1979, 13, 29-39.

Tucker, G.R. & Cahir, S.R. Directions for future research within the context of bilingual education programs. In R. Silverstein (Ed.) Occasional Papers on Linguistics No. 6. Proceedings of the Third International Conference on Frontiers in Language Proficiency and Dominance Testing. Carbondale, IL: Southern Illinois University 1980.

Tucker, G.R. & Gray, T.C. Bilingualism in the U.S. melting pot. Language and Society, 1980, 2 (summer) 5-8.

Waggoner, D. NCES' Survey of languages. Linguistic Reporter, 1976, 19, 3, 5 & 8.